

Claims

[c1] A self-propelled device for bi-directional movement across a bottom surface of a block of ice disposed over water comprising:

 a flotation base having a plurality of bi-directional non-binding flotation base skates attached thereto;

 a rod pivotally attached to the flotation base; and

 a flotation arm having a bi-directionally non-binding flotation arm skate attached thereto, the flotation arm skate positioned to contact the bottom surface of the ice to disengage a flotation arm contacting end at the completion of a forward travel cycle;

wherein the flotation arm is secured to the rod for propelling the base across the bottom surface of the ice when the rod rotates upwardly with respect to the base, the rod having a first position extending downwardly from the base and a second upper position at an angle with respect to the first position, the flotation arm being constructed and arranged to engage and push against the bottom surface of the ice to propel the base as the first member rotates from the first position to the second position.

- [c2] The device of claim 1 wherein the rod comprises an end connected to the base rotatably along a horizontal axis, the rod having a first position in which the rod is substantially vertical extending downwardly from the base and a second position at a vertical angle with respect to the first position.
- [c3] The device of claim 1 wherein a hinge pivotally attaches the rod to the base.
- [c4] The device of claim 1 wherein the flotation base and flotation arm are made of a material selected from the group consisting of wood, plastic and combinations thereof.
- [c5] The device of claim 1 wherein the rod is heavier than water and the flotation arm is lighter than water, whereby the rod returns from the second position to the first position due to gravity.
- [c6] The device of claim 1 wherein the rod returns from the second position to the first position due to a spring hinge.
- [c7] The device of claim 1 wherein the rod is made of metal.
- [c8] The device of claim 1 wherein the flotation base has a cut-out, wherein the arm extends through the cut-out.

- [c9] The device of claim 1 wherein the flotation arm contacting end comprises at least one spike.
- [c10] The device of claim 10 wherein the spike height is adjustable.
- [c11] The device of claim 1 further comprising a line attached to the bottom of the moveable rod at a first end and whose other end passes through an eyelet which is attached to the underside of the rear end of the flotation base for rotating the arm and rod thereby moving the base.
- [c12] The device of claim 1 further comprising a handle attached to the flotation base.
- [c13] The device of claim 1 further comprising a holding box adapted to selectively release a material as the base moves across the bottom surface of the ice.
- [c14] A self-propelled device for bi-directional movement across a bottom surface of a block of ice disposed over water comprising:
 - a flotation base having a plurality of bi-directional non-binding flotation base skates attached thereto;
 - a rod pivotally attached to the flotation base;
 - a flotation arm having a bi-directional non-binding

flotation arm skate attached thereto, the flotation arm skate positioned to contact the bottom surface of the ice to disengage a flotation arm contacting end at the completion of a forward travel cycle; and a line attached to the bottom of the moveable rod at a first end and whose other end passes through an eyelet which is attached to the underside of the rear end of the flotation base for rotating the arm and rod;

wherein the flotation arm is secured to the rod for propelling the base across the bottom surface of the ice when the rod rotates upwardly with respect to the base, the rod having a first position extending downwardly from the base and a second upper position at an angle with respect to the first position, the flotation arm being constructed and arranged to engage and push against the bottom surface of the ice to propel the base as the first member rotates from the first position to the second position, the rod being heavier than water and the flotation arm being lighter than water, whereby the rod returns from the second position to the first position due to gravity.

[c15] The device of claim 14 further comprising a handle attached to the flotation base.

- [c16] The device of claim 14 wherein the flotation base contains a holding box adapted to selectively release a material as the base moves across the bottom surface of the ice.
- [c17] The device of claim 14 wherein the material is selected from one of the group consisting of chum, a life saving device and research equipment.
- [c18] A method for bi-directionally traversing across a bottom surface of a block of ice disposed over water comprising the steps of:
 - cutting a hole in the block of ice;
 - inserting a bi-direction icewalker, the icewalker comprising
 - a flotation base having a plurality of bi-directional non-binding flotation base skates attached thereto;
 - a rod pivotally attached to the flotation base;
 - a flotation arm having a bi-directional non-binding flotation arm skate attached thereto, the flotation arm skate positioned to contact the bottom surface of the ice to disengage a flotation arm contacting end at the completion of a forward travel cycle; and
 - a line attached to the bottom of the moveable rod at a first end and whose other end passes through an eyelet which is attached to the underside of the rear end of the flotation base for rotating the arm and

rod;

wherein the flotation arm is secured to the rod for propelling the base across the bottom surface of the ice when the rod rotates upwardly with respect to the base, the rod having a first position extending downwardly from the base and a second upper position at an angle with respect to the first position, the flotation arm being constructed and arranged to engage and push against the bottom surface of the ice to propel the base as the first member rotates from the first position to the second position, the rod being heavier than water and the flotation arm being lighter than water, whereby the rod returns from the second position to the first position due to gravity;

attaching a hook and bait to the line; and pulling on the line to propel the icewalker.

- [c19] The method of claim 18 further comprising the step of releasing a material as the base moves across the bottom surface of the ice.
- [c20] The method of claim 19 wherein the flotation base contains a holding box adapted to selectively release the material.
- [c21] The method of claim 18 further comprising the steps of: drilling a second ice hole;

propelling the icewalker to the second hole;
removing the icewalker;
attaching a second line to the line; and
pulling the line and second line back and forth beneath
the ice.